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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/586,571	06/02/2000	Mark A. Webster	INSL:0012	6023

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EXAMINER

SHAND, ROBERTA A

ART UNIT PAPER NUMBER

2616

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

54

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/586,571	WEBSTER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Roberta A. Shand	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 June 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-20,22-36,38-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,10-17,20,22-30,34-36,38-43 and 46-48 is/are rejected.
- 7) ☒ Claim(s) 8,9,18,19,31-33,44 and 45 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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***Consideration of Affidavit***

1. The affidavit under 37 CFR 1.132 filed December 14, 2005 is sufficient to overcome the rejection of claims 1, 3, 6-18, 20, 22-31, 35, 36 and 38-43 over Andren (U.S. 6678310 B1). However, the affidavit is insufficient to overcome the rejection based on Preuss. In fact, there is nothing in the affidavit that can be used to overcome Preuss.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 3-18, 20, 22-31, 34-36, 38-43 and 46-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Preuss in view of Langlais (U.S. 6091932).

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5. Regarding claim 1, Preuss teaches (fig. 3 and column 6) a transmitter that uses a dual packet configuration for wireless communication, comprising: a first modulator that modulates a first portion of each packet (header) solely according to a serial modulation (fig. 3, BPSK is a standard which is used for DSSS); and a second modulator that modulates a second portion of each packet (payload, fig. 3, QAM).

6. Preuss does not modulating second portion solely using parallel modulation specifically, OFDM.

7. Langlais teaches (col. 2, lines 32-57 and col. 3, lines 35-59) BPSK for single carrier modulation. Langlais also teaches OFDM, which uses QAM for multi-carrier modulation. Therefore since Preuss teaches IFFT or FFT, and Langlais teaches BPSK as single carrier and QAM as multi-carrier in OFDM including IFFT or FFT, it would have been obvious to one of ordinary skill in the art to adapt OFDM to Preuss' system as it is well known in the art.

8. Regarding claim 20, Preuss teaches (figure 3 and column 6) a wireless communication device that is configured to communicate using a dual packet configuration, comprising: a transmitter configured to transmit packets with a dual configuration; a receiver configured to receive packets with a dual configuration; and the dual packet configuration including first and second portions, the first portion modulated solely according to a serial modulation (fig. 3, BPSK is a standard which is used for DSSS) method and the second portion modulated according to a modulation method (fig. 3, QAM ).

9. Preuss does not teach a second portion using parallel modulation, specifically OFDM.

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10. Langlais teaches (col. 2, lines 32-57 and col. 3, lines 35-59) BPSK for single carrier modulation. Langlais also teaches OFDM, which uses QAM for multi-carrier modulation. Therefore since Preuss teaches IFFT or FFT, and Langlais teaches BPSK as single carrier and QAM as multi-carrier in OFDM including IFFT or FFT, it would have been obvious to one of ordinary skill in the art to adapt OFDM to Preuss' system, as it is well known in the art.

11. Regarding claim 36, Preuss teaches (figure 3 and column 6) a method of wireless communication using a dual packet communication, comprising: modulating a first portion (header) of each packet solely according to a serial modulation (fig. 3, BPSK is a standard which is used for DSSS); and modulating a second portion (payload) of each packet according to a modulation (fig. 3, QAM).

12. Preuss does not teach a second portion modulated solely using parallel modulation, specifically OFDM.

13. Langlais teaches (col. 2, lines 32-57 and col. 3, lines 35-59) BPSK for single carrier modulation. Langlais also teaches OFDM, which uses QAM for multi-carrier modulation. Therefore since Preuss teaches IFFT or FFT, and Langlais teaches BPSK as single carrier and QAM as multi-carrier in OFDM including IFFT or FFT, it would have been obvious to one of ordinary skill in the art to adapt OFDM to Preuss' system, as it is well known in the art.

14. Regarding claim 3, Preuss teaches (fig. 3) teaches the first portion including a preamble and a header.

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15. Regarding claims 4 and 5, as for the preamble being long or short, it would have been obvious to one of ordinary skill in the art to adapt to Preuss' system either long or short preambles to enhance the scope of the invention.
16. Regarding claims 6, 22 and 38, Langlais teaches (col. 2, lines 32-57 and col. 3, lines 35-59) the header indicating an OFDM mode bit.
17. Regarding claims 7, 23 and 38, Preuss teaches (fig. 14) the header including a length field indicating the duration of the second portion.
18. Regarding claim 10, 24, 39 and 40, as for the first portion based on a first clock fundamental; and the second portion based on a second clock fundamental, this is inherent in Preuss' system since the modulation schemes are different for each portion.
19. Regarding claims 11, 12, 25 and 26, as for the clock fundamental ranging from 13MHz to 22 MHz, it would have been obvious to one of ordinary skill in the art to adapt to Pruess and Langlais' system this range to enhance the scope of the system.
20. Regarding claims 13, 27 and 41, Langlais teaches (col. 4) the second portion including OFDM symbols wherein each OFDM symbol includes a guard interval with a standard number of samples for OFDM.

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21. Regarding claims 14, 28 and 42, Langlais teaches (col. 4) the second portion including OFDM symbols wherein each OFDM symbol includes a guard interval with an increases number of samples.
22. Regarding claims 15, 29 and 43, Langlais teaches (col. 4) the second portion including OFDM symbols wherein each OFDM symbol includes a reduced number of frequency sub carriers.
23. Regarding claim 16, Langlais teaches (col. 4) each OFDM symbol includes 48 frequency sub carriers.
24. Regarding claims 17 and 30, Pruess teaches (col. 11, lines 20-67) each of the frequency sub carriers is a data sub carrier.
25. Regarding claims 34 and 46, Pruess teaches (fig. 4) a standard mode of communication as modulating both header and payload in using serial modulation.
26. Regarding claim 35, as for the transmitter and receiver each are configured to operate in the 2.4 GHz frequency band, it would have been obvious to one of ordinary skill in the art to adapt to Pruess and Langlais 2GHz or any values desired as this is a well known value to use.
27. Regarding claims 46-49, Preuss teaches (col. 3, lines 49-59) DSSS.

***Allowable Subject Matter***

28. Claims 8, 9, 18, 19, 31-33, 44 and 45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

29. Applicant's arguments filed June 8, 2006 have been fully considered but they are not persuasive. Applicant argues that Pruess does not teach second portion of the packet is modulated according to a parallel modulation. Examiner relies on Langlais, which teach such feature. Langlais teaches (col. 2, lines 32-57 and col. 3, lines 35-59) BPSK for single carrier modulation. Langlais also teaches OFDM, which uses QAM for multi-carrier modulation. Therefore since Preuss teaches IFFT or FFT, and Langlais teaches BPSK as single carrier and QAM as multi-carrier in OFDM including IFFT or FFT, it would have been obvious to one of ordinary skill in the art to adapt OFDM to Preuss' system, as it is well known in the art.

30. Regarding Applicant's arguments on December 14, 2005, Applicant argues that Pruess does not teach using OFDM in modulating the second portion of the packet and the mention of FFT does not imply OFDM. The above rejection relies upon Langlais to meet Applicant's limitation of OFDM modulation of the second portion of the packet.



***Conclusion***

**31. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


32. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberta A Shand whose telephone number is 571-272-3161. The examiner can normally be reached on M-F 9:00am-5:30pm.

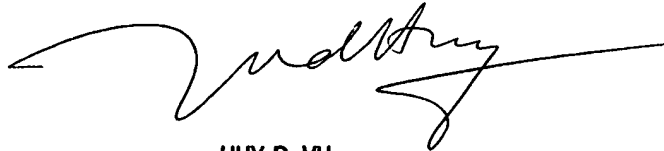
34. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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35. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Roberta A Shand  
Examiner  
Art Unit 2665



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